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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,703	05/05/2006	Hans Eisenmann	D5116-00046	5038

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DUANE MORRIS LLP - Philadelphia
IP DEPARTMENT
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103-4196

EXAMINER

LIN, SUN J

ART UNIT	PAPER NUMBER
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2825

MAIL DATE	DELIVERY MODE
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01/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,703	Applicant(s) EISENMANN ET AL.	
	Examiner Sun J. Lin	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/05/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/5/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to application 10/595,703 filed on 05/05/2006. Claims 1 – 20 remain pending in the application.

QUAYLE ACTION

2. This application is in condition for allowance except for the following formal matters:

Claim Objections

- Claim 1, line 5, change “simulation” to **—simulating—**.
- Claim 1, line 6, before “patterns” insert **—layout—**.
- Claim 1, line 8, before “patterns” insert **—layout—**.
- Claim 3, line 1 – 2, change “one of the patterns” to **—one pattern of the layout patterns—**.
- Claim 3, line 2, change “the deviation” to **—a deviation—**.
- Claim 3, line 3 (two places), change “one parameter” to **—one of the parameters—**.
- Claim 4, line 2, before “patterns” insert **—layout—**.
- Claim 4, line 4, change “the pattern” to **—one pattern of the layout patterns—**.
- Claim 5, line 1, change “the patterns” to **—ones of the layout patterns—**.
- Claim 6, line 1, change “the patterns” to **—the ones of the layout patterns—**.
- Claim 7, line 2, before “patterns” insert **—layout—**.
- Claim 8, line 2, change “the group” to **—a group—**.
- Claim 10, line 5, change “simulation” to **—simulating—**.
- Claim 10, line 6, before “patterns” insert **—layout—**.
- Claim 10, line 8, before “patterns” insert **—layout—**.
- Claim 11, line 7, change “simulation” to **—simulating—**.
- Claim 11, line 8, before “patterns” insert **—layout—**.
- Claim 11, line 10, before “patterns” insert **—layout—**.
- Claim 12, line 5, change “the user input;” to **—a user input including the set of priorities; and—**.
- Claim 13, line 1, before “system” insert **—computer implemented—**.
- Claim 13, line 3, before “lithography” delete **—the—**.

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- Claim 14, line 1, before “system” insert **—computer implemented—**.
- Claim 15, line 1, before “system” insert **—computer implemented—**.
- Claim 15, line 1, change “claim 13” to **—claim 14—**.
- Claim 16, line 1, before “system” insert **—computer implemented—**.
- Claim 16, line 1, change “selection” to **—selecting—**.
- Claim 16, line 2, change “the pattern” to **—layout pattern—**.
- Claim 17, line 1, before “system” insert **—computer implemented—**.
- Claim 17, line 2, before “parameters” insert **—process—**.
- Claim 18, line 1, before “system” insert **—computer implemented—**.
- Claim 18, line 1, change “claim 14” to **—claim 15—**.
- Claim 18, line 1, before “parameters” insert **—the process—**.
- Claim 19, line 1, before “system” insert **—computer implemented—**.
- Claim 20, line 4, change “simulation” to **—simulating—**.
- Claim 20, line 5, before “patterns” insert **—layout—**.
- Claim 20, line 8, change “of” to **—on—**.

Appropriate corrections are required.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

Claims 1 – 20 are allowed because the prior art does not teach or fairly suggest the following subject matter:

- A method/means for determining sensitivities of a plurality of layout patterns to a plurality of parameters based on simulation results on a fabrication of the layout patterns in a lithographic process and using the sensitivities to calculate deviations of the layout pattern across a range of each respective one of the parameters thereby selecting ones of the layout patterns to be

- used as test patterns in combination with other limitations as recited in independent **Claim 1**, **Claim 10** and **Claim 11**;
- A computer implemented system comprising a means for constructing an extrema map for use in identifying one or more changes to layout data of a mask in combination with other limitations as recited in independent **Claim 12**;
 - An integrated circuit fabricated by a method comprising determining sensitivities of a plurality of layout patterns to a plurality of parameters based on simulation results on a fabrication of the layout patterns in a lithographic process and using the sensitivities to select ones of the layout patterns to be used as test patterns in combination with other limitations as recited in **Claim 20**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Sun James Lin* whose telephone number is (571) 272 - 1899. The examiner can normally be reached on Monday-Friday 9:30AM - 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Chiang* can be reached on (571) 272 - 7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

All responses to this Office Action should be mailed to **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450** or faxed to **571-273-8300**.

/Sun J Lin/

Primary Examiner, Art Unit 2825